

## Bellwork Friday 11/10

Factor and solve  $f(x) = 2x^3 + 6x^2 - 2x - 6$   
given that  $(x + 1)$  is a factor

$$\frac{2(x^3 + 3x^2 - x - 3)}{x+1}$$

$$\begin{array}{r} -3 \\ 3 \overline{) 2} \\ (x+3)(x-1) \end{array}$$

$$\begin{array}{r} x^3 \quad x^2 \quad x \quad \quad \\ -1 \overline{) 1 \quad 3 \quad -1 \quad -3} \\ \underline{1 \quad -1 \quad -2 \quad 3} \\ 1x^2 \quad 2x \quad -3 \quad 0 \\ \underline{1x^2 \quad 2x \quad -3} \\ 0 \end{array}$$

$$2(x+1)(x^2+2x-3)$$

$$2(x+1)(x+3)(x-1) = 0$$

Solutions  $-1, -3, 1$